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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/976,725	10/12/2001	Casimer M. DeCusatis	FIS920010131US1(14564)	2486

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Steven Fischman, Esq.
Scully, Scott, Murphy & Presser
400 Garden City Plaza
Garden City, NY 11530

EXAMINER	
CURS, NATHAN M	
ART UNIT	**PAPER NUMBER**
2633	

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/976,725	DECUSATIS ET AL.
	Examiner	Art Unit
	Nathan Curs	2633

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 January 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *08 August 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1, 3, 11 and 18 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claims 1, 3, 11 and 18 recite dithering the optical filter bandpass as well as adjusting the wavelengths of some of the optical signals in the network. The specification supports a wavelength adjusted relative to a fixed bandpass filter that the wavelength passes through, and supports a bandpass filter dithered relative to a fixed wavelength that passes through it, but does not disclose adjusting wavelengths of optical signals transmitted through a dithered optical bandpass filter, as stated in the claims.

Claim 3 recites the limitation "dithering the filter bandpass about the wavelengths of each of said set of signals", and claims 11 and 18 recite the limitation "means to pass said set of optical signals through the filter, wherein the filter bandpass is dithered to generate filter output signals". The specification does not disclose dithering a filter bandpass where the one dithered bandpass filter filters multiple channels/wavelengths as a set of signals. Page 3, lines 14-21 of the specification only discloses the network as a whole having a "set of optical signals" and discloses tracking changes to the set of signals by passing "each of the signals through a filter

having a bandpass function". This disclosure only supports a single signal (i.e. one wavelength) going through a bandpass filter. The "set of optical signals" shown in figs. 1 and 2 show only that the network as a whole has a set of optical signals; these figures do not show the bandpass filter at all.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1, 2 and 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Roberts (US Patent No. 5513029) in view of Jones et al. (US Patent No. 6208441), and further in view of Epworth et al. (US Patent No. 5777773).

Regarding claim 1, Roberts discloses a method of tracking and compensating for changes in a multi-channel, dense wavelength division multiplexing (DWDM) network, comprising employing a dither feedback mechanism and dithering the wavelength of each channel in use to obtain a measurement of the optical transfer function (OTF) in the network at any instant in real-time, wherein, when the network configuration is changed, the resulting change in the OTF is tracked and feedback signals are used to compensate for the change to maintain a defined optical transfer function in the network (fig. 4, and col. 4, lines 4-40, and col. 12, line 41 to col. 13, line 63). Roberts discloses equalizing a wavelength's power by tapping the wavelength and using dither signal feedback at an inline EDFA (fig. 3 and col. 8, line 34 to col. 10, line 6), and also using this technique at a WDM EDFA in equalizing the WDM

wavelengths (fig. 4 and col. 13, lines 15-36), but does not disclose adding/dropping wavelengths at an add/drop node, and thus does not disclose the dither feedback configuration using add/drop optical filters. Jones et al. disclose a WDM add/drop node where an add/drop wavelength is filtered from the main signal and tapped, the tap detected for use in controlling the balance of add/drop channel power and pre-emphasis of the WDM signal at the add/drop node (fig. 1 and col. 4, lines 21-51 and col. 6, lines 49-63). It would have been obvious to one of ordinary skill in the art at the time of the invention that an inline add/drop node could be used in the system of Roberts by modifying the tapped feedback configuration of the inline EDFA of Roberts, and the respective wavelength power balancing teaching of Roberts, with the add/drop node teaching of Jones et al., using add/drop filtering and tapping the add/drop wavelength, as taught by Jones et al., in order to provide the benefit of being able to add/drop select wavelengths at various points in the route between the two WDM terminals of Roberts while maintaining wavelength power balancing. Roberts discloses dithering the transmission wavelength at the signal source (col. 7, lines 34-59), but does not disclose dithering an optical filter bandpass about the center wavelength. Epworth et al. disclose that either dithering a signal at the source or dithering a downstream bandpass filter component about the bandpass frequency can be used for locking the bandpass signal when monitoring signal power (col. 1, lines 21-38). It would have been obvious to one of ordinary skill in the art at the time of the invention that the dither for each WDM wavelength in the combination of Roberts and Jones et al. could be applied using tunable filters downstream from the source instead of dithering the wavelength at the source, since either method can be used conventionally, as taught by Epworth et al.

Regarding claim 2, the combination of Roberts, Jones et al. and Epworth et al. discloses a method according to claim 1, wherein the feedback mechanism is based on a wavelength

locked loop and allows a spectral decomposition (optical power vs. wavelength) with very fast response corrections (Roberts: col. 11, line 1 to col. 12, line 40).

Regarding claim 18, Roberts discloses a system for tracking and compensating for changes in a multi-channel dense wavelength division multiplexing (DWDM) network, comprising a first dither source for dithering the wavelength of each channel and a tracking circuit to track changes to the WDM signal set, and a control for making adjustment to compensate for the changes to maintain a defined optical transfer function in the network (fig. 4, and col. 4, lines 4-40, and col. 12, line 41 to col. 13, line 63; and col. 7, lines 34-59 which dither source teaching applies for each wavelength of the fig. 4 WDM system). Roberts discloses a system for equalizing a wavelength's power by tapping the wavelength and using dither signal feedback at an inline EDFA (fig. 3 and col. 8, line 34 to col. 10, line 6), and also a WDM EDFA using the same technique in equalizing the WDM wavelengths (fig. 4 and col. 13, lines 15-36), but does not disclose a WDM add/drop unit. However, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teaching of Jones et al. with Roberts as described above for claim 1. In addition, Roberts discloses dithering the transmission wavelength at the signal source (col. 7, lines 34-59), but does not disclose dithering a filter bandpass. However, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teaching of Epworth et al. with the combination of Roberts and Jones et al. as described above for claim 1.

Regarding claim 19, the combination of Roberts, Jones et al. and Epworth et al. discloses a combination add unit and drop unit according to claim 18, wherein the control includes: a second dither source for generating a dither signal; and a mixer for mixing the dither signal with the at least one of the filter output signals (col. 7, lines 34-59 which teaching applies

for each wavelength at the WDM EDFA, based on the teaching Epworth et al. applied to the combination).

Regarding claim 20, the combination of Roberts, Jones et al. and Epworth et al. discloses a combination according to claim 19, wherein: the first dither source dithers said at least one of the optical signals at a given rate; and the second dither source dithers the dither signal at said given rate (col. 7, lines 34-59 which teaching applies for each wavelength at the WDM EDFA, based on the teaching Epworth et al. applied to the combination).

5. Claims 3, 7-11 and 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Roberts (US Patent No. 5513029) in view of Epworth et al. (US Patent No. 5777773).

Regarding claim 3, Roberts discloses a method of adjusting for changes in optical signals transmitted through a multi-channel optical network, comprising: transmitting a set of optical signals through a network, each of the optical signals having a respective wavelength, and tracking changes to said set of signals, and dithering the wavelengths of each of said set of signals, and using dither feedback to adjust the network or the set of optical signals to compensate for said changes to maintain a defined optical transfer function in the network (fig. 4, and col. 4, lines 4-40, and col. 12, line 41 to col. 13, line 63). Roberts discloses equalizing a wavelength's power by tapping the wavelength and using dither signal feedback at an inline EDFA (fig. 3 and col. 8, line 34 to col. 10, line 6), and also discloses using this technique at a WDM EDFA in equalizing the WDM wavelengths (fig. 4 and col. 13, lines 15-36), but Roberts discloses dithering during signal modulation, not dithering a filter bandpass about each wavelength. Epworth et al. disclose that either dithering a signal at the source or dithering a downstream bandpass filter component about the bandpass frequency can be used for locking the bandpass when monitoring signal power (col. 1, lines 21-38). It would have been obvious to

one of ordinary skill in the art at the time of the invention that the dither for each WDM wavelength in Roberts could be applied using dithered bandpass filters for the tapped wavelengths in the WDM EDFA dither feedback configuration of Roberts, instead of dithering each wavelength at the source during modulation, since either method can be used conventionally, as taught by Epworth et al.

Regarding claim 7, the combination of Roberts and Epworth et al. discloses a method according to claim 3, wherein the bandpass filter output signal inherently represents the difference between the bandpass wavelength of the filter and the wavelength of a respective one of the signals passed through the filter.

Regarding claim 8, the combination of Roberts and Epworth et al. discloses a method according to claim 3, including the steps of: using the bandpass filter output signals to generate a power density signal representing the spectral power density of said set of optical signals and using the power density signal to adjust said spectral power density in response to changes in said power density (Roberts: col. 11, line 1 to col. 12, line 40 and Epworth et al.: col. 6, lines 49-63).

Regarding claim 9, the combination of Roberts and Epworth et al. discloses a method according to claim 3, including the steps of: processing the bandpass filter output signals to generate a further signal proportional to the magnitude and the direction of the difference between the passband wavelength of the filter and the wavelength of one of the signals passed through the filter; and using said further signal to adjust the optical network or the set of optical signals to compensate for said changes in the optical spectrum (Roberts: col. 11, line 1 to col. 12, line 40 and Epworth et al.: col. 6, lines 49-63).

Regarding claim 10, the combination of Roberts and Epworth et al. discloses a method according to claim 9, further comprising the step of dithering at least one of the optical signals at

a given rate; and including the steps of: generating a dither signal at said given rate and mixing the dither signal with at least one of the filter output signals (Roberts: col. 7, lines 34-59 which teaching applies at the WDM EDFA, based on the teaching Epworth et al. applied to Roberts, in the combination of Roberts and Epworth et al.).

Regarding claim 11, Roberts discloses an optical control monitor at an EDFA comprising: a receiver for receiving a set of optical signals, each of the optical signals having a respective wavelength; and a tracking circuit to track changes to said set of signals, wherein the wavelengths of the optical signals are dithered, and a control for using the signals to make a defined adjustment to compensate for said changes to maintain a defined optical transfer function in the network (fig. 4, and col. 4, lines 4-40, and col. 12, line 41 to col. 13, line 63). Roberts discloses equalizing a wavelength's power by tapping the wavelength and using dither signal feedback at an inline EDFA (fig. 3 and col. 8, line 34 to col. 10, line 6), and also discloses using this technique at a WDM EDFA in equalizing the WDM wavelengths (fig. 4 and col. 13, lines 15-36), but Roberts does not disclose dithering a filter bandpass. However, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teaching of Epworth et al. with Roberts as described above for claim 3.

Regarding claim 15, the combination of Roberts and Epworth et al. discloses an optical control monitor according to claim 11, wherein the bandpass filter output signal inherently represents the difference between a bandpass wavelength of the filter and the wavelength of a respective one of the signals passed through the filter.

Regarding claim 16, the combination of Roberts and Epworth et al. discloses an optical control monitor according to claim 11, wherein the control includes: means to use the filter output signals to generate a power density signal representing the spectral power density of said set of optical signals and means to use the power density signal to make the defined

adjustment in response to changes in said power density (Roberts: col. 11, line 1 to col. 12, line 40 and Epworth et al.: col. 6, lines 49-63).

Regarding claim 17, the combination of Roberts and Epworth et al. discloses an optical control monitor according to claim 11, wherein the control includes: a dither source for generating a dither signal and a mixer for mixing the dither signal with at least one of the filter output signals (Roberts: col. 7, lines 34-59 which teaching applies at the WDM EDFA, based on the teaching Epworth et al. applied to Roberts, in the combination of Roberts and Epworth et al.).

6. Claims 4-6 and 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Roberts (US Patent No. 5513029) in view of Epworth et al. (US Patent No. 5777773) as applied to claim 3 above, and further in view of Jones et al. (US Patent No. 6208441).

Regarding claim 4, the combination of Roberts and Epworth et al. discloses a method according to claim 3. The combination discloses equalizing a wavelength's power by tapping the wavelength and using dither signal feedback at an inline EDFA (Roberts: fig. 3 and col. 8, line 34 to col. 10, line 6), and also using this technique at a WDM EDFA in equalizing the WDM wavelengths (Roberts: fig. 4 and col. 13, lines 15-36), but does not discloses add/drop in optical network, passing at least some of the optical signals through the filter of the optical control monitor. Jones et al. disclose a WDM add/drop node where an add/drop wavelength is removed/added with a filter, the remaining wavelengths passed without being removed/added, and the add/drop wavelength tapped, the tap detected for use in controlling the balance of add/drop channel power and pre-emphasis of the WDM signal at the add/drop node (fig. 1 and col. 4, lines 21-51 and col. 6, lines 49-63). It would have been obvious to one of ordinary skill in the art at the time of the invention that an inline add/drop node could be used in the combination

of Roberts and Epworth et al. by modifying the tapped feedback configuration of the inline WDM EDFA of the combination, with the add/drop node teaching of Jones et al., as taught by Jones et al., in order to provide the benefit of being able to add/drop select wavelengths at various points in the route between the two WDM terminals, passing the remaining wavelengths, while maintaining wavelength power balancing.

Regarding claim 5, the combination of Roberts and Epworth et al. discloses a method according to claim 3. The combination discloses equalizing a wavelength's power by tapping the wavelength and using dither signal feedback at an inline EDFA (Roberts: fig. 3 and col. 8, line 34 to col. 10, line 6), and also using this technique at a WDM EDFA in equalizing the WDM wavelengths (Roberts: fig. 4 and col. 13, lines 15-36), but does not disclose dropping optical signals from the network, including the step of adjusting the set of optical signals or the network to compensate for the dropping of optical signals from the network. Jones et al. disclose a WDM add/drop node where an add/drop wavelength is removed/added with a filter and the drop signal is tapped, the tap detected for use in controlling the balance of add/drop channel power and controlling the power offset relative to the drop power for optimum adjustment in asymmetric system topographies (fig. 1 and col. 4, lines 21-51 and col. 6, lines 49-63). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the add/drop node teaching of Jones et al. with the combination of Roberts and Epworth et al. as described above for claim 4.

Regarding claim 6, the combination of Roberts and Epworth et al. discloses a method according to claim 3. The combination discloses equalizing a wavelength's power by tapping the wavelength and using dither signal feedback at an inline EDFA (Roberts: fig. 3 and col. 8, line 34 to col. 10, line 6), and also using this technique at a WDM EDFA in equalizing the WDM wavelengths (Roberts: fig. 4 and col. 13, lines 15-36), but does not disclose the step of adding

optical signals to the network, including the step of adjusting the set of optical signals or the network to compensate for the adding of optical signals to the network. Jones et al. disclose a WDM add/drop node where an add/drop wavelength is removed/added with a filter and the add signal is tapped, the tap detected for use in controlling the balance of add/drop channel power and controlling the add power to be consistent with the system pre-emphasis (fig. 1 and col. 4, lines 21-51 and col. 6, lines 49-63). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the add/drop node teaching of Jones et al. with the combination of Roberts and Epworth et al. as described above for claim 4.

Regarding claim 12, the combination of Roberts and Epworth et al. discloses an optical control monitor according to claim 11. The combination discloses equalizing a wavelength's power by tapping the wavelength and using dither signal feedback at an inline EDFA (Roberts: fig. 3 and col. 8, line 34 to col. 10, line 6), and also using this technique at a WDM EDFA in equalizing the WDM wavelengths (Roberts: fig. 4 and col. 13, lines 15-36), but does not discloses that that the bandpass filter is adapted to add or drop optical signals from the network. Jones et al. disclose a WDM add/drop node where an add/drop wavelength is removed/added with a filter and the add/drop signal is tapped, the tap detected for use in controlling the balance of add/drop channel power and controlling the add power to be consistent with the system pre-emphasis (fig. 1 and col. 4, lines 21-51 and col. 6, lines 49-63). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the add/drop node teaching of Jones et al. with the combination of Roberts and Epworth et al. as described above for claim 4.

Regarding claim 13, the combination of Roberts, Epworth et al. and Jones et al. discloses an optical control monitor according to claim 12, where an add/drop wavelength is removed/added with a filter and the drop signal is tapped, the tap detected for use in controlling

the balance of add/drop channel power and controlling the power offset relative to the drop power for optimum adjustment in asymmetric system topographies (Jones et al: fig. 1 and col. 4, lines 21-51 and col. 6, lines 49-63).

Regarding claim 14, the combination of Roberts, Epworth et al. and Jones et al. discloses an optical control monitor according to claim 12, where an add/drop wavelength is removed/added with a filter and the add signal is tapped, the tap detected for use in controlling the balance of add/drop channel power and controlling the add power to be consistent with the system pre-emphasis (Jones et al.: fig. 1 and col. 4, lines 21-51 and col. 6, lines 49-63).

Response to Arguments

7. Applicant's arguments filed 24 January 2006 have been fully considered but they are not persuasive. The modifications to the claims submitted 24 January 2006 do not overcome the 112 1st paragraph deficiencies regarding adjusting the laser wavelength relative to a dithered bandpass filter. Regardless of the modifications, the applicant is still claiming adjusting the laser wavelength relative to a dithered bandpass filter. This is not supported in the specification. The applicant cites specification page 3, line 15-29 and page 8, lines 8-21 as supporting adjusting the laser wavelength relative to a dithered bandpass filter; however, this feature is not disclosed in the applicant's citation or elsewhere in the specification and drawings. Page 8, lines 8-21 describes fig. 8, which is an embodiment where the laser source is dithered, not the filter bandpass. Dithering the filter bandpass is described for the fig. 11 embodiment, and the specification teaching dithering adjusting the filter bandpass relative to a fixed wavelength for this embodiment. There is no mention of adjusting the laser wavelength relative to the dithered filter bandpass for the fig. 11 embodiment.

8. Applicant's arguments filed 24 January 2006 regarding the bandpass filter filtering a set of optical signals (i.e. one filter filtering a plurality of wavelengths simultaneously) have been fully considered but they are not persuasive. The examiner previously cited page 3, lines 14-21 of the specification to show that the specification does support dithering a filter bandpass where the one dithered bandpass filter filters multiple channels/wavelengths as a set of signals. In response, the applicant cited page 3, lines 19-20 and lines 25-26. However, the applicant's citations do not persuasively show dithering a filter bandpass where one dithered bandpass filter filters multiple channels/wavelengths as a set of signals. First, the phrase "each of said set" in lines 19-20 does not make even sense. If "said set" refers to one set, there cannot be "each of" the set; there can only be "said set" or "each of said signals". Lines 17-19 state the feature "tracking changes to said set of signals by passing each of the signals through a filter having a bandpass function". This clearly shows a relationship of one wavelength to one filter, not a set of wavelengths to one filter. Lines 19-20 further limit the feature of lines 17-19, stating "and dithering the filter bandpass about the wavelengths of each of said set of signals to generate filter output signals". The filter mentioned in the further limitation of lines 19-20 can only be interpreted as the same filter of lines 17-19, which clearly is in a relationship of one wavelength to one filter, regardless of the "each of said set" phrase, which does not make sense. Further, the applicant's citation of lines 25-26 also only discloses a relationship of one wavelength to one filter.

9. Applicant's arguments filed 24 January 2006 regarding the references not disclosing dithering the bandpass function of the filter have been fully considered but they are not persuasive. The applicant argues that Roberts does not discloses this feature. This is a true statement and is thus the reason why Roberts is combined with Epworth, as described in the

rejection. However, the applicant also argues that Epworth does not teach this feature. This is false. Epworth teaches this feature as applicable in the combination. Although the applicant argues that Epworth does not teach the feature, the applicant does not mention any specific deficiencies of the Epworth teaching cited for use in combination with Roberts.

Conclusion

10. Any inquiry concerning this communication from the examiner should be directed to N. Curs whose telephone number is (571) 272-3028. The examiner can normally be reached on M-F (from 9 AM to 5 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan, can be reached at (571) 272-3022. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (800) 786-9199.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pairdirect.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JASON CHAN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600